

Introduction and Scope:

The scope of our examination was limited to a review of inspection activities within the Department of Inspections, Licenses and Permits. We flowcharted the inspection process for the various types of inspections. The organizational chart for the enforcement inspectors and sediment control can be found in the attachment. We sampled permits from fiscal year 1999 from each trade for code compliance and adequate documentation of the process. We also observed the inspection process by participating in on-site inspections with various inspectors within each trade. Additionally, we reviewed the report issued by Insurance Services Office, Inc., an independent organization which reviews Inspection Departments to help insurance agencies determine the cost of house insurance in the County. This group is independent of the County and reviews activities that were pertinent to our review.

There are several trades which require inspection to comply with various building and trade codes as well as Howard County's amendments to those codes. The following pages will identify each trade, the code which it uses for the basis of its inspections, the number of personnel in the County inspection division, the number of inspections performed in fiscal year 1999 and any recommendations pertinent to our review.

Department Overview:

_____The Department of Inspections, Licenses and Permits (DILP) reports to the County Executive and is responsible for the processing of building permits, issuing licenses, reviewing construction plans, and inspecting the results of those permits to insure compliance with various codes that primarily provide for the life safety of those affected by the permit. DILP is organized into five divisions. They are Operations, Inspections and Enforcement, Plan Review, Licenses and Permits and Sediment Control. Our review focused primarily on the Inspections and Enforcement Division. The budget for the entire department in FY 99 was \$4.4 million which increased to \$4.8 million in FY 00. There are a total of 67 employees and they are paid through the General Fund.

Inspections and Enforcement Division:

The Inspections and Enforcement Division performs health and public safety inspections related to issued permits pertinent to various trades in construction and renovation of residential and

commercial buildings and structures. This includes the building, electrical, plumbing and HVACR trade inspections as required. Additionally, code compliance inspections are required for rental housing, fire preparedness, mobile home parks, taxicabs, signs and massage establishment inspections. The FY 00 budget increased employees in this division by one to a total of 35. The FY 00 funding required for this division is \$2.08 million, nearly half of the entire DILP budget.

Background:

The inspection process is similar for the various trades. It begins with a citizen or contractor applying for a permit, submitting building plans and paying the appropriate fee. The permit clerk enters the permit information into a computer program called Cornerstone. The contractor is given a telephone number and a code sheet associated with their trade task. When the contractor has completed work necessitating an inspection, they phone in the code to the automated Cornerstone telephone number. That evening, the Cornerstone application produces a report and yellow tags for those jobs that need to be inspected the next day. These tags are distributed to the various inspectors by census track, geographic, or permit location method, and the inspectors prepare their routes in the most efficient manner to complete all inspections that day. Generally, after the inspectors have completed their assigned inspections they return to their personal residences from the field. Once home, they call into Cornerstone and dial in the code results of their inspections. That evening, the application is run and a report is issued that lists that day's inspections and the results. The supervisor compares the report to the inspector's records for accuracy. Completed paperwork is filed with the permit in the permit folder. This process continues until a final inspection is completed.

Details of the specific trade inspections follow:

Building Inspections:

This trade inspects capital projects, including new schools, commercial and residential buildings and structures for footings, drain tile, slab, framing, insulation, fireplace, driveway apron, ceiling, handicapped accessibility, fuel tank installation and removal and testing, final building and various combinations of the above. These inspections require multiple visits during the course of construction as the job moves toward completion. It is estimated that there will be 35,000 points of inspection in FY 99 and also in FY 00. There is one supervisor and eight building inspectors in this

unit. One inspector also serves as the Fire Protection inspector. Fire code requirements include inspections of various sprinkler installations, testing alarms, hydrostatic test and rough-in, air pressure and range hood test, and the final fire protection inspection. The Fire Protection inspector also performs inspections to ensure that the minimum handicap requirements have been met.

Electrical Inspections:

_____ This trade inspects residential and commercial electrical installations, including rough wire, temporary service, wall and ceiling close-in, slabs, trench, service, pool bonding and final inspections. The County forecasts that approximately 17,000 different items in this area would be inspected in FY 99 as well as FY 00. One dwelling may require five to eight points of inspection and multiple returns to the site as the job progresses to the different stages. There is one supervisor and five regulation inspectors in this unit.

Plumbing:

This trade enforces the plumbing and mechanical code by inspecting building sites for the ground work, water and sewer, water, rough-in, natural gas piping, condensate drain, hydro/pressure test, flush test, backflow preventer, propane gas piping, stormwater system, and the final inspection. There is one plumbing supervisor and six plumbing inspectors. Because of the multiple inspections per permit, it is estimated in FY 00 that there will be 36,000 plumbing items inspected which is the same as FY 99.

HVACR: (HEATING, VENTILATION AND AIR-CONDITIONING)

This was recently legislated as an area of inspection and has one inspector who works between the Building and Plumbing supervisors for the rough-in and final inspections of the heating, ventilation and air-conditioning systems. Since this began in FY 00, activity history is limited. It is estimated that in FY 00 there will be 5,000 HVACR items inspected.

Housing and Sign Code:

The rental housing inspections that occur are required by the housing code. A myriad of inspection types occurs that are generated by the code related to safety and by complaints. Some of

these inspections address fire safety items, trash items, upkeep, and pest concerns. It is anticipated that 17,000 inspections will occur in FY 00, as did in FY 99. This unit has one supervisor and four inspectors. In FY 00, a request to increase the number of inspectors by one was approved by the administration bringing the total to five. The sign control inspections do not have an assigned inspector and has not for several years. Currently, inspections are performed based on complaints only. This is not in compliance with the Code which states that signs and bill boards for which a permit is required shall be inspected annually by the Department of Inspections, Licenses and Permits for compliance with this subtitle and other laws of Howard County. The new person hired will share some of these duties.

Taxi Cabs, Massage Parlors and Liquor Establishments:

Taxi cabs and drivers are licensed in Howard County, cabs are inspected annually by the Housing Inspectors when the license is renewed. The taxis are scheduled and inspected at the inspectors office. All taxi cab drivers must have passed an exam to be licensed. The inspectors also administer the exam for the taxi cab drivers to ensure that they know their way around the County, are able to communicate and make proper change. Drivers are required to take the exam. There are about 100 licensed taxis in Howard County.

The massage inspections are limited to certain health and safety inspections at three establishments in Howard County. This inspection is performed every two years at license renewal. These inspections are performed by the Housing Inspectors.

Liquor establishment inspections are performed at the request of the Liquor Board for new construction and new licenses. These inspections are also performed by the Housing Inspectors and are limited to certain health and fire safety inspections.

Findings and Recommendations:

We attended several inspections with the various trade inspectors and also tested approximately ten randomly selected issued permits from each trade to assess appropriate documentation of the inspection process. Of the 72 permits tested, 14 were not properly signed off on the back of the permit as to the completion of the inspection.

We talked to the Insurance Services Office, Inc. (ISO) representative about her study of building code effectiveness in Howard County. ISO is an independent group that evaluates building codes that are in effect in a community and how those codes are enforced. ISO looks at three areas. The following elaborates those areas:

Administration of Codes:

This section evaluates the administrative support available in the jurisdiction for code enforcement. It looks for adopted building codes and modifications to those codes through ordinance, code enforcers qualifications, experience and education, zoning provisions, contractor/builder licensing requirements, public awareness programs, the building department's participation in code development activities and the administrative policies and procedures.

Plan Review:

This section assesses the plan review function to determine the staffing levels, personnel experience, performance evaluation schedules, review capabilities, and level of review of construction documents for compliance with the adopted building code for the jurisdiction being graded.

Field Inspection:

This section evaluates the field inspection function to determine the staffing levels, personnel experience, performance evaluation schedules, review capabilities, and level of review of building construction for compliance with the adopted building code for the jurisdiction being graded.

The concept is that the communities with stronger codes that are well enforced, result in lower insurance costs because the buildings are safer and suffer less damage during catastrophic events. The ISO report was released in December, and Howard County received a grade of 3 on a scale of 1-10, with 1 being exemplary. The reviewer told us this is considered very good and it is the highest rating received by any county in Maryland. This should result in lower insurance rates on new construction to the property owners in Howard County.

Our conversation with the reviewer concurred that a checklist of what is required to be inspected per permit should be available as documentation in the permit folder as those inspections are performed and noted when complete and by whom. The current documentation required is a written notation as to whether the inspection passed and any additional comments deemed necessary. As indicated above, several of our tests showed this information was missing from the folder. Additionally, a prewritten checklist would assist in making sure all inspections are performed and accomplished. A complete record would facilitate the County should discrepancies occur and/or court action be required. We therefore recommend:

- _____ 1. **The Department consider an inspection checklist be completed with each inspection as part of the required permanent record with that permit. If existing methods are continued to be used, then a more thorough review should be documented. The supervisor should be made to ascertain that the required inspection documentation becomes part of the permanent record.**

Administration's Response:

The Administration concurs with this recommendation for inspection checklists. This issue will be discussed with the Department of Inspections, Licenses and Permits' staff. In addition, training will be provided and a procedure will be implemented.

The Howard County Department of Inspections, Licenses and Permits has adopted several building codes as their own. They are:

- The Building Officials and Code Administrators International (BOCA) National Building Code
- The International Mechanical Code
- The Council of American Builder Officials (CABO) One and Two Family Dwelling Code and the Energy Conservation Code
- The Life Safety Code by the National Fire Protection Association
- The Howard County Electrical Code, Plumbing and Gas Fitting Code, and Sign Code
- Maryland Building Code for the Handicapped

In general, Howard County follows these guidelines and any amendments or exceptions are identified in the Howard County Code.

It was determined that the 12 permits we tested that had a rejected inspection causing a reinspection to occur, no reinspection fee was assessed or collected. We were told that the inspectors in all trades are lenient to the contractors by not insisting on a reinspection fee. They believe this fosters a harmonious relationship and mutual respect and goodwill between the County and its builders. We were told that through their experience of inspection and first-hand knowledge of the various builders, inspectors assess those fees where they feel they will do the most good. This method of assigning fees is subjective, being based on an individual's assessment. Our concern is that our test indicated a 100% non-charge of the reinspection fee. While the code does state that the reinspection fee "may" be charged, we believe more frequent enforcement may not only increase County revenues, but decrease the number of inspection returns to a particular site, freeing the inspector for additional reviews. We therefore recommend that:

2. **DILP administrators revisit the application of the reinspection fee and assess whether a more frequent execution of this code section would achieve desirable results.**

Administration's Response:

The Administration concurs and DILP will revisit the policy for applying reinspection fees to determine if the process is working as intended. This will be addressed with the inspectors at future forums.

Additionally, we noted of the 10 sign permits that were examined, none were inspected. This was not surprising as the Sign Inspector position was eliminated in FY 1997. We interviewed Inspection Enforcement supervisors and inspectors and were told that sign inspections are driven by complaints. Subtitle 3.511 of the Howard County Code states that any sign required by a permit is to be inspected annually. In FY 99 alone, there were 393 sign permits processed. While the sign plans are reviewed by a supervisor, the need for at least one additional inspector in this area appears to be required for Code enforcement. We therefore recommend that:

3. **An additional Sign Inspector be hired or staff assignments be redistributed so that all signs that require a permit are inspected annually as required by the Code.**

Administration's Response:

The enforcement of the sign code is a “reactive” enforcement system based upon complaints. When a Sign Code Inspector becomes available to the department, a more aggressive sign code enforcement procedure will follow.

Auditor's Comment:

Although the County is using a “reactive” enforcement system based upon complaints, this is not in compliance with Subtitle 3.511 of the County Code. We did note that the County Executive's proposed FY 2001 Operating Budget includes a Sign Inspector position to address this issue.

We also observed that there are several thousand outstanding inspections that have not been finalized due to a myriad of reasons. Primarily, these are for homeowner improvements on which the final inspection is not completed because the owner fails to initiate the call on the project. Our research determined that in FY 91, the Inspection Enforcement Division had 41 authorized positions performing an estimated 98,000 inspections. The division now estimates that they will perform 110,000 inspections with 35 authorized positions. The cut backs occurred during the recession in FY 92 and have never been restored. Although our attendance at various inspections indicated that inspections were being performed quickly, the expertise of all the inspectors was quite apparent and they appeared to focus on the major areas of safety concerns. There appears to be some discretion in each inspector's approach to methodology in performing an inspection. The pace is generally rapid, as the inspections must be performed before the tradesman can continue to the next phase of the project. We were told that the inspectors have been assigned the backlog as MDOs and that has reduced the backlog. However, several thousand still exist. The outstanding inspections were identified in a previously issued audit report. In addition, the report by Insurance Services Office, Inc. gave a low rating under the staffing levels for the field inspection category. We believe that additional inspectors should be considered to bring the division to a level that would clear the backlog, keep it clear, and allow for a pace that provides for an even higher quality inspection. Furthermore, the inspectors reduced load due to additional inspectors would allow for better documentation of inspection activities that was noted as needing improvement above. We therefore recommend that:

4. **The administration consider hiring an additional building inspector to eliminate the backlog, improve documentation and improve the pace of the inspection allowing for increased quality on site.**

Administration's Response:

Rather than hiring additional inspectors, the backlog of incomplete permits is being reduced by an equitable distribution of work to the inspectors. As a result the backlog of open permits has diminished significantly.

Auditor's Comment:

The Auditor's Office will perform a follow-up review of this area in the next 12-24 months to determine if the remaining backlog has been reduced.

One of the analyses we performed listed each trade and inspection unit by calendar year and listed the number of inspections performed each month by employee. We sometimes noted large differences in the totals by inspector for a month and then by total year. The reason became apparent when we were informed that the lower output of some of the individuals was due to commercial inspections being more time-consuming than residential inspections. Also noted was the distribution of inspector routes by census tract needing review because of changes in population. Additionally, the specific type of inspection assigned may have required more time because of its complexity. A less acceptable reason for the differences in the number of inspections performed is in how they are counted. Some inspectors record a multi complex inspection as one inspection while others record each unit as an inspection. A procedure should be written and disseminated to the inspectors instructing them in the process of how these inspections are recorded so that a uniform method is used by all. This will allow management to more accurately account for inspection activity and to assess the same. Additionally, we were told that the review of the census tract data for the rental inspection unit had not occurred for several years. This should be accomplished once every six months and inspector assignments adjusted accordingly to better even out the workload. We therefore recommend that:

5. **A policy be written and distributed to the inspectors that makes the recording of inspections uniform when multiple units or items are required to be inspected by the permit.**

Administration's Response:

The Department of Inspections, Licenses and Permits is in the process of reexamining this concern and will address uniformity issues after evaluating the data.

6. **A policy be written and enforced that requires a review of the method used to distribute the assignment routes to the inspectors every six months.**

Administration's Response:

The Administration concurs. A policy will be written and distributed to the inspectors to assure that assignment of inspections will be equitable and uniformly distributed.

The inspectors of the various trades use the telephone to call in their inspection results. All the inspectors are issued pagers and cellular phones. An additional way to retrieve most information is to dial in with a remote computer using the County's Citrix software. This would let the inspectors simulate their desktop in Cornerstone and input data and research information from the field. It also would allow for inspectors to maintain their miles in spreadsheet format and prepare comments and results directly to word processing software. Since laptops have seen significant reductions in cost, the payback from purchasing a number of these units, equipped with a modem, would be much quicker than in the past. Since this would increase efficiency in the inspection process, and may be used for even greater uses in the future, we recommend that initially:

7. **DILP seek the administration's approval to purchase several laptop computers that include remote processing hardware and software which allow for retrieval and input of permit and inspection data and information. If these prove useful and productive to the inspectors and the process, DILP should purchase as many as would be needed to continue the improvement.**

Administration's Response:

This matter has significant budgetary implications and it will be addressed at the appropriate time.

Auditor's Comment:

We will continue to monitor this area as part of our follow-up process.

Sediment Control:

This is a separate division within DILP, but we include it here because of the inspection process being similar to the trade inspections. The division approves and inspects erosion and sediment control measures for land development and mass grading for residential, commercial and capital projects. Grading is inspected at residential and commercial construction sites to measure compliance with approved site plans. There is one supervisor and five inspectors that will inspect approximately 10,000 items in FY 00.

The inspection process begins with the citizen or contractor submitting a site plan which is reviewed by the Howard Soil Conservation District. Once the plan is reviewed, the applicant applies for the grading permit and pays the appropriate fees. The permit clerk enters the permit information into Cornerstone. The information is then sent to the Sediment Control division where the permit is reviewed for plan approval, proper fees and posted surety. Approval is then entered into Cornerstone. The permit is then distributed to the inspectors based on the census track. Next the inspector schedules a preconstruction meeting at the site at which he will issue the permit. After the permit is issued, the citizen/contractor can begin installing the sediment controls. Once the controls have been installed to the applicant's liking, he or she calls to schedule the inspection. After the inspector approves the controls installed, the construction begins. The inspector is required to perform a site inspection and document every two weeks. After construction is complete and the final controls have been installed the permit is closed out in Cornerstone. Every time the inspector visits a site he is required to complete a field inspection report.

We reviewed the documentation for ten grading permits. Of these ten permits, one had no documentation to show that inspections were being performed. We were told that the inspector assigned to that area was not completing the required documentation and for that reason his employment was terminated. For five of the ten permits reviewed, there was not enough documentation to support that the inspections were being performed an average of every two weeks. Further inquiry revealed that for large developments many permits may be issued. When the inspector goes on a site inspection, he will look at all of the lots in the development. Although the inspector is going to the inspection site at least once every two weeks, he is not documenting inspection of all sites he reviewed. He only documents a site that had a problem and/or violation. We do not feel that this is sufficient to support the Maryland Department of the Environment Water Management Administration's requirements that every active site be inspected for compliance with

an approved plan on the average of once every two weeks and that written reports are prepared after every inspection. We therefore recommend that:

8. **Policies and Procedures be written to state that all active grading permits be inspected every two weeks and that adequate documentation of this inspection be maintained in the permit file.**

Administration's Response:

Policies and Procedures are already in place and state that active grading permits should be inspected every two weeks. The policy also states that adequate documentation will be maintained in the permit file. The department has requested two additional Sediment and Erosion Control Inspectors in the FY 01 budget.

Auditor's Comment:

Although the policy may have been in effect, we did not find adequate documentation of compliance with that policy. We hope the additional personnel will allow the department to provide additional documentation.

The inspectors are required to drive their personal vehicles to inspection sites that are often undeveloped. These conditions cause unnecessary wear and tear on the inspector's personal vehicles. Sediment Control is spending a total of approximately \$13,000 on mileage reimbursement for all five inspectors. The cost of a new vehicle would be approximately \$5,000 per year. The Construction Inspection Division of the Department of Public Works performs inspections similar to those performed by the Sediment Control. The Construction Inspection Division has several county vehicles available for the inspectors to use at their discretion. This policy has been highly regarded by the inspectors. Howard County Policy & Procedure No. 400.6, Travel and Moving Regulation Reimbursement Guidelines states that the use of privately owned vehicles is permissible only when it is determined to be advantageous to the County, or when County vehicles are not available. We therefore recommend that:

9. **Consideration be given to purchasing several County cars for use by inspectors to determine if it would be advantageous to the County and to remain in compliance with Howard County Policy and Procedure No. 400.6.**

Administration's Response:

This matter has significant budgetary implications and it will be addressed at the appropriate time.

Auditor's Comment:

We will continue to monitor this area as part of our follow-up process.

KZ:dl-DISP3

MEMORANDUM

February 7, 2000

MEMO TO: David Hammerman, Director
Department of Inspections, Licenses and Permits

FROM: Ronald S. Weinstein
County Auditor

SUBJECT: Draft Report of Inspections Enforcement

Attached please find a draft copy of our audit report relating to inspections enforcement. This report contains nine recommendations we believe are necessary to improve efficiency, reduce backlog and improve documentation.

We will be contacting you during the week of February 14th to schedule an exit conference. The purpose of this meeting will be to answer any questions you may have about the recommendations and findings in the draft.

Thank you for your assistance during this audit process. Please contact me at x-2005 if you have any questions.

KZ:sd-DISP3

April 2000

The County Council and County Executive
of Howard County, Maryland

Pursuant to Section 212 of the Howard County Charter and Council Resolution 22-1985, we
have conducted a review of selected activities of the

DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS
INSPECTION ENFORCEMENT

and our report is submitted herewith. The scope of our examination related specifically to a review
of inspection enforcement. The body of our report presents our findings and recommendations.

The contents of this report have been reviewed with the Chief Administrative Officer and the
Director and staff of the Department of Inspections, Licenses and Permits. We wish to express our
gratitude to the Department of Inspections, Licenses and Permits for the cooperation and assistance
extended to us during the course of this engagement.

Ronald S. Weinstein, C.P.A.
County Auditor

Keith Zumbrun
Auditor-in-Charge

**DEPARTMENT OF
INSPECTIONS, LICENSES AND PERMITS
INSPECTION ENFORCEMENT
APRIL 2000**